

In The Claims

1. (currently amended) A method for processing signals in an RF subsystem to eliminate the need for a low noise amplifier therein, the method comprising:

providing a plurality of intercoupled micromechanical devices including an input port for receiving signals and an output port; and

vibrating the micromechanical devices to initially pass a desired frequency range of unamplified signals while substantially attenuating signals outside the desired frequency range and then to convert between first and second frequencies and filter the desired frequency range of unamplified signals without the need for the low noise amplifier.

2. (original) The method as claimed in claim 1 wherein the low noise amplifier is an RF low noise amplifier.

3. (currently amended) An RF receiver subsystem which eliminates the need for a low noise amplifier therein, the subsystem comprising:

an image-reject vibrating micromechanical filter including an input port for receiving signals, [for] the filter passing a desired frequency range of the signals while substantially attenuating signals outside the desired frequency range; and

a vibrating micromechanical mixer-filter coupled to the filter having an output port, the mixer-filter being adapted to be coupled to electronics for converting and filtering the desired frequency range of signals without the need for the low noise amplifier.

4. (original) The subsystem as claimed in claim 3 wherein the low noise amplifier is an RF low noise amplifier.

5. (original) The subsystem as claimed in claim 3 wherein the filter is a relatively wide band filter and the mixer-filter is a narrow band mixer-filter.

6. (currently amended) An RF receiver subsystem which eliminates the need for a low noise amplifier, the subsystem comprising:

a vibrating micromechanical frequency range selector [for] having an input port for receiving signals, the selector passing a desired frequency range of the signals while substantially attenuating signals outside the desired frequency range; and

a vibrating micromechanical mixer-filter coupled to the selector having an output port and adapted to be connected to electronics for converting and filtering the desired frequency range of signals without the need for the low noise amplifier.

7. (original) The subsystem as claimed in claim 6 wherein the low noise amplifier is an RF low noise amplifier.

8. (currently amended) An RF transceiver subsystem which substantially reduces the need for RF front-end power, the subsystem comprising:

a vibrating micromechanical frequency range selector having any input port for receiving signals, [for] the selector passing a desired frequency range of the signals while substantially attenuating signals outside the desired frequency range; and

a vibrating micromechanical mixer-filter coupled to the selector having an output port, the mixer-filter being adapted to be connected to electronics for converting and filtering signals wherein the need for RF front-end power is substantially reduced.

Please cancel claims 9-19.

Please add new claims 20-26 as shown below.

20. (New) The method as claimed in claim 1 wherein the first frequency is in an RF range and the second frequency is in an IF range.

21. (New) The subsystem as claimed in claim 3 wherein the vibrating micromechanical mixer-filter converts from an RF range to an IF range.

22. (New) The subsystem as claimed in claim 3 wherein the image-reject vibrating micromechanical filter passes unamplified signals within the desired frequency range to the vibrating micromechanical mixer-filter.

23. (New) The subsystem as claimed in claim 6 wherein the vibrating micromechanical mixer-filter converts from an RF range to an IF range.

24. (New) The subsystem as claimed in claim 6 wherein the vibrating micromechanical frequency range selector passes unamplified signals within the desired frequency range to the vibrating micromechanical mixer-filter.

25. (New) The subsystem as claimed in claim 8 wherein the vibrating micromechanical mixer-filter converts between an RF range and an IF range.

26. (New) The subsystem as claimed in claim 8 wherein the vibrating micromechanical frequency range selector passes unamplified signals within the desired frequency range to the vibrating micromechanical mixer-filter.